

Unit Planning Guide: Grade K Unit 4 of 4

Unit Title: <i>Operations and Algebraic Thinking</i>	Pacing (<i>Duration of Unit</i>): <i>10 Weeks</i>
Grade: <i>Kindergarten</i>	Buffer Day(s):

Desired Results

Transfer Goals

Students will be able to independently use their learning to:

- **Make sense of problems and persevere in solving them.**
- **Reason abstractly and quantitatively.**
- **Construct viable arguments and critique the reasoning of others.**
- **Model with mathematics.**
- **Use appropriate tools strategically.**
- **Attend to precision.**
- **Look for and make use of structure.**
- **Look for and express regularity in repeated reasoning.**

Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)

Standards (Priority Standards in bold):

- **OA.1: Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out, verbal explanations, expressions, or equations.**
- **OA.2: Solve addition and subtraction word problems, and add and subtract within 10 by using objects or drawings to represent the problem.**
- **OA.3: Decompose numbers less than or equal to 10 into pairs in more than one way, by using objects or drawings, and record each decomposition by a drawing or equation.**
- **OA.4: For any number 1 to 9, find the number that makes 10 when added to the given number, by using objects or drawings, and record the answer with a drawing or equation.**
- **OA.5: Fluently add and subtract within 5.**
 - CC.1: Count to 100 by ones and tens
 - CC.2: Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
 - CC.3: Write numbers 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).
 - CC.4a: When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
 - CC.4b: Understand that the last number name said tells the number of objects counted. The n
 - CC.4c: Understand that each successive number name refers to a quantity that is one larger.
 - CC.5: Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle,

WIDA for English Language Learners

Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting
Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**

In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports.

or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	
Meaning (*Mostly assessed through Performance Tasks/Assessments)	

<p>Big Ideas: (<i>Statements and concepts written in teacher friendly language which reflects the important [but not obvious] generalizations we want students to be able to arrive at. These are used by the teacher to focus daily instruction.</i>)</p> <ul style="list-style-type: none"> It is important to develop both procedural and conceptual understanding of addition and subtraction. Addition is putting together. Subtraction is taking apart. 	<p>Essential Questions: (<i>Questions which frame ongoing and important inquiries about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.</i>)</p> <ul style="list-style-type: none"> What are ways of putting together and taking apart numbers? Why is the number 10 so important? How can we use numbers to create new ones?
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Acquisition (*Mostly assessed through traditional summative assessments)	
<p>Knowledge: <i>Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.</i></p> <p><i>Students will know ...</i></p> <ul style="list-style-type: none"> That adding whole numbers results in a greater quantity (more). That subtracting whole numbers results in a smaller quantity (less). Tamisha's Note: in general, adding doesn't always equal more, and subtracting doesn't always equal less. It's important that teachers understand this, even for kindergarten, because students will have an easier time applying operation rules to integers when they get to 6th grade. [feel free to delete my note and change the highlighting, I just wanted you to see it.] That there are multiple ways of putting together numbers to find a sum. That two addends equal a sum. <p>Symbols: =, +, -</p> <p>Vocabulary: equals, plus, minus</p>	<p>Skills: <i>The discrete skills and process students should be able to use independently (Bloom's Level of Learning should be noted in parentheses.)</i></p> <p><i>Students will be skilled at:</i></p> <ul style="list-style-type: none"> Modeling addition and subtraction problems using manipulatives (Analyzing) Fluently adding and subtracting within 5 (Analyzing) Showing multiple ways of finding a sum (Creating) Finding the missing addend using manipulatives (Applying) Counting by ones and tens to 100 (Remembering) Counting forward without beginning at one up to 100 (Remembering) Writing numbers 0-20 (Remembering) Naming the next number in a sequence (Remembering)